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Test Bench

Timely reviews of new and not-so-new equipment

A New Table Top Receiver: The Alinco DX-R8T

by Mark Coady

While there never seems to be a shortage of new portable shortwave receivers in the marketplace it is indeed a rare occasion to see a new table top model. With the major players, like Drake, constricting their offerings or exiting the market altogether, it was a surprise to hear that Alinco, a Japanese Ham radio manufacturer, had come out with a table top receiver.

As well as being a shortwave receiver, this new offering was being heralded as being capable of DRM reception (with appropriate software) as it comes with a 12 Khz IQ output. And it could be controlled by computer software. The reputation of Alinco and the fact that I would be able to hear DRM broadcasts sold me on this unit and I picked one up at Durham Radio.

This new offering uses the same shell as the DXSR8-T transceiver. A hint to this heritage is that there is a plug inserted in the front of the cabinet where the microphone would go. It seems to be built like a tank with a metal case rather than the plastic we have been seeing over the past decade and more. The cabinet measures approximately 9”X3”X9” (L-W-D). So, it is actually smaller than some of the larger portable receivers we have seen in the market such as the Grundig Satellit 800. A metal bail (like those Kenwood and Icom used to employ) raises the receiver to a comfortable viewing position.

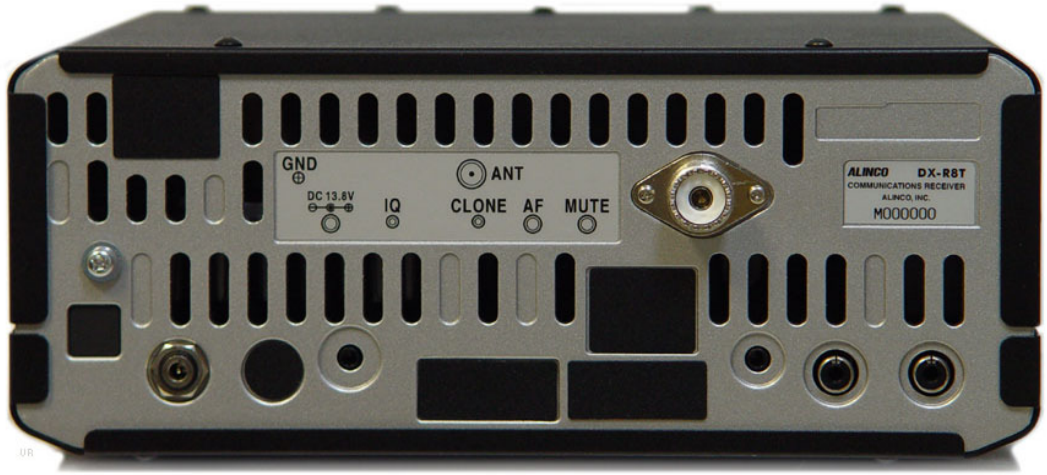
The frequency coverage, displayed on a brilliant white backlit LCD display - which can be dimmed down to zero illumination, is listed as 150 kHz to 30 mHz. In reality it tunes down to 30 kHz. Alinco does not guarantee reception below 150 kHz although I have heard utility activity in the 60 kHz range. The modes of reception are AM, CW (with selectable sideband), LSB, USB, and narrowband FM. Available bandwidths in kHz are (wide/narrow): AM – 9/2.4; SSB – 2.4/1; CW – 1/0.5; FM – 9 (no narrow filter for FM). As well as the wide/narrow filter options, this receiver also has RIT (Receiver Incremental Tuning) and a variable IF shift to move away from offending stations. As with earlier Kenwood models, attenuation of 10 and 20 db can also be employed to reduce powerhouse signals from overloading the front end.

The front panel does seem to be quite crammed with knobs and push-buttons but operating this receiver need not be a daunting task. If ever there was a need to heed the old adage “If all else fails, follow the directions” then

this is it. The owner's manual is quite well written and contains many step-by-step instructions on how to tune the receiver, set its parameters, and store your favourite stations (including receive parameters) in any one of the 600 available memory channels. By consulting the owner's manual frequently you will soon become an expert at operating this receiver as its operation is really quite straightforward.

The front panel of the DX-R8T

The back panel of the DX-R8T is where you will add an external antenna (SO-239 jack – sometimes called a UHF jack), attach a ground wire (a ground screw), and attach appropriate cables to decode DRM broadcasts and control the receiver from a computer (with appropriate software). The DX-R8T can also be used in conjunction with a Ham transmitter as a jack is provided to mute the receiver when you key up the transmitter.



The back panel of the DX-R8T

Tuning the DX-R8T can be accomplished by direct keyboard entry, memory selection, slewing up and down with arrow keys, or, for those who like old time radios, with a tuning knob. As with many other receivers, the last frequency tuned, before accessing a memory channel, is stored in the VFO, making it easy to store parallel frequencies to compare them. When using the tuning knob, tuning increments can be varied from 10 Hz to 1 kHz. It is also possible to set scanning ranges so that you can bandscan without tuning the receiver. A squelch control will eliminate background noise to facilitate this.

One of the neat things about this receiver is its ability to decode DRM signals and to be controlled by SDR (Software Defined Radio) computer software. A user supplied stereo audio cable with 3.5 mm (1/8”) plugs at either end is connected from the IQ jack on the rear panel to the line input of a computer. Appropriate software, especially freeware like Dream or KG-SDR, is used to take the 12 kHz audio output of the DX-R8T and play the DRM signal through the sound card and out the speakers or headphone jack of the computer. An optional cable, the ERW-7, connects between the Clone jack on the rear panel of the DX-R8T and terminates in a USB which, when hooked to a computer, allows for the DX-R8T to be controlled with such software.

Some smaller laptop computers only feature a microphone as an audio input. In these cases, a USB-based audio input will be needed. In my case, because I also use a laptop as a recording studio for composing music, I have a USB-based audio mixer that doubles as the DX-R8T's audio feed to the laptop.

Another real neat feature that the DX-R8T has, that it shares with the DXSR8-T transceiver from which it was designed, is that the front panel can be disconnected from the main part of the receiver making for an approximately 3”X9”X3” (L-W-D) handheld control unit. There is a short cable that joins the two. An optional 5 metre long cable is then used to join the two. With this optional cable in place it is possible to have the main part of the receiver in a car's trunk and the front panel in the front seat for mobile DXing.

There are a few caveats about the DX-R8T. The most important one is the fact that it does not come with an onboard power supply. It only comes with a DC cable with fuses and bare wire ends as the receiver takes 12 VDC to operate it. A power supply of at least 3 amps is recommended. Fortunately, everyone who is selling the DX-R8T, such as Universal Radio and Durham Radio, offer an appropriate third-party power supply at a reasonable price. Appropriate power supplies from Alinco, themselves, are cases of overkill as they provide way too much power for the required use (30 amps) and can be quite pricey.

The other things to remember are, since this is not a portable receiver, the FM broadcast band is not included. Also, a good external antenna is a must

as the DX-R8T does not come with a whip antenna for shortwave nor an internal ferrite-bar antenna for mediumwave. I am currently feeding the DX-R8T with a tilted, terminated, folded dipole (T2FD) that resonates around 7300 kHz, for shortwave, and an external ferrite bar antenna for longwave and mediumwave, with quite excellent results.

I've only owned the DX-R8T for a short while but it is definitely a keeper. It picks up everything that my Eton E-1 does but its sensitivity is just a little bit better. Despite the fact that there is no synchronous detection, as there is with the Eton E-1, the bandwidth filters, IF shift, and RIT tuning are more than adequate compensation. Add to that the fact that the metal case blocks much of the RFI that plaques my Eton – making for quieter reception conditions. And I can finally decode DRM signals. All in all, I have found a truly capable receiver at a very reasonable price. Well done, Alinco!